

CLAIMS

What Is Claimed Is:

- 5 1. A ply-twisted yarn for use in cut resistant fabric, comprising:
- (a) at least one single yarn having a sheath/core construction with a sheath comprising cut-resistant staple fibers and a core comprising an
- 10 inorganic fiber; and
- (b) at least one single yarn comprising cut resistant staple fiber and at least one continuous elastomeric filament and being free or substantially free of inorganic fibers.
- 15 2. The ply-twisted yarn of claim 1, wherein the inorganic fiber is not a glass fiber.
3. The ply-twisted yarn of claim 2, wherein the
- 20 inorganic fiber is a metal fiber.
4. The ply-twisted yarn of claim 1, wherein the yarn is ply-twisted with a Tex system twist multiplier of from 4.8 to 28.7 (cotton count twist multiplier of
- 25 0.5 to 3.0).
5. The ply-twisted yarn of claim 4, wherein the yarn is ply-twisted with a Tex system twist multiplier of from 6.7 to 20 (cotton count twist multiplier of 0.7
- 30 to 2.1).

6. The ply-twisted yarn of claim 1, wherein the cut resistant staple fibers are poly(paraphenylene terephthalamide).

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7. The ply-twisted yarn of claim 1, wherein the elastomeric fiber is a spandex fiber.

8. A cut resistant fabric comprising the ply-
10 twisted yarn of claim 1.

9. A cut-resistant article comprising the ply-twisted yarn of claim 1.

15 10. A cut resistant fabric made from a bundle of yarns, said bundle of yarns, comprising:

(a) at least one single yarn having a sheath/core construction with a sheath comprising cut-resistant staple fibers and a core comprising an
20 inorganic fiber; and

(b) at least one single yarn comprising cut resistant staple fiber and at least one elastomeric filament and being free or substantially free of inorganic fibers.

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11. The cut-resistant fabric of claim 10, wherein the bundle of yarns comprises a single yarn of (a) ply-twisted with a single yarn of (b).

30 12. The cut-resistant fabric of claim 10, wherein the inorganic fiber is not a glass fiber.

13. The cut-resistant fabric of claim 12, wherein the inorganic fiber is a metal fiber.

5 14. A cut-resistant article, comprising the cut-resistant fabric of claim 10.

15. A process for making a ply-twisted yarn for a cut resistant fabric, comprising:

10 (a) combining

 i) at least one first single yarn comprising a cut resistant staple fiber and a continuous elastomeric filament and being free or substantially free of inorganic fibers, the elastomeric filament being
15 incorporated into the first single yarn while stretched under tension, with

 ii) at least one second single yarn having a sheath/core construction with a sheath comprising cut resistant staple fibers
20 and an inorganic fiber core; and

 (b) ply-twisting together the first and second single yarns to form a ply-twisted yarn.

25 16. The process for making a ply-twisted yarn of claim 15, wherein the first single yarn is ply-twisted with a Tex system twist multiplier of from 4.8 to 28.7 (cotton count twist multiplier of 0.5 to 3.0) with the second single yarn.

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17. A process for making a cut resistant fabric, comprising:

 (a) forming a bundle of yarns comprising

5 i) at least one first single yarn
comprising a cut resistant staple fiber and a
continuous elastomeric filament and being
free or substantially free of inorganic
fibers, the elastomeric filament being
incorporated into the first single yarn while
stretched under tension, with

10 ii) at least one second single yarn
having a sheath/core construction with a
sheath comprising cut resistant staple fibers
and an inorganic fiber core; and

(b) knitting or weaving the bundle of yarns into a
fabric.

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18. The process for making a cut-resistant fabric
of claim 17, wherein the bundle of yarns comprises a
single yarn of (i) ply-twisted with a single yarn of
(ii).

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19. The process for making a cut-resistant fabric
of claim 18, wherein the first single yarn is ply-
twisted with a Tex system twist multiplier of from 4.8
to 28.7 (cotton count twist multiplier of 0.5 to 3.0)
25 with the second single yarn.

20. The process for making a cut-resistant fabric
of claim 18, wherein the inorganic fiber is not a glass
fiber.

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